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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:
CHEAH et al.

Application No.: 10/068,523

Filed: February 5, 2002

For: THERMALLY ENHANCED METAL
CAPPED BGA PACKAGE

Confirmation No. 9901

Group Art Unit: 2826

Examiner: Alexander O. Williams

Attorney Docket No.: 9818-066-999

#13
Response
Omniscience
7/12/03

RESPONSE TO OFFICE ACTION MAILED MARCH 3, 2003

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Applicants submit the following amendments and remarks in response to the Office Action mailed March 3, 2003, in the above-identified application.

In Claims:

Following is a list of all pending claims.

1. (Pending) A ball-grid array package comprising:
a substrate having first and second sides;
an integrated circuit device attached to said first side of said substrate;
a metal cap having a side wall portion and a top portion forming an internal cavity,
wherein said metal cap is attached to said first side of said substrate along a peripheral
portion of said first side so that said integrated circuit device is within said internal cavity;
and

an epoxy encapsulant material filling a substantial portion of said internal cavity, and
said epoxy encapsulant material being in contact with both said integrated circuit device and
said top portion of said metal cap,

wherein said metal cap is constructed from a material selected from one of copper,
aluminum, or alloys thereof.

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